

TROLEXX

LET'S GET **REAL**
AIR XKS

REAL-TIME RCS DETECTION

TECHNICAL DATASHEET

Air XS Silica Monitor from Trolex, developed with the support of the Centre for Work Health Safety, is a world-first advancement in RCS detection, deploying pioneering Optical Refraction Technology to deliver real-time readings of dangerous RCS particulates in airborne dust mixtures.

Air XS analyses multiple detection parameters for silica including size, symmetry, and a series of optical markers unique to RCS particulates. High-speed data is processed in real time and triggers a triple-voting system that positively identifies and distinguishes silica content.



THE RESULT

A robust and accurate real-time detector of RCS in challenging workplace environments.

TECHNICAL OVERVIEW

Particulate sensing parameters

Sensing technology	Optical Refraction Technology (ORT) Light-Scatter Photometer (OPC)
Particulate measurement	Target RCS identification range 1µm – 10µm
Max. typical dust loading*	150mg/m ³
Continuous range	25mg/m ³
Displayed data	RCS mg/m ³ Total particles/litre
Resolution	1,000 th of a mg
Averaging period	15 minutes, 1 hour, 4 hours, 8 hours and 12 hours
Sampling interval	1 – 60 seconds
Particle count	>600 particles/second
Total airflow rate	~1.5L/m (nominal)
Typical RCS accuracy	+/- 25%

*The instrument can define particulate measurement peak trends up to the quantity specified.

Note: Sustained exposure to dust quantities above 25 mg/m³ will be logged; however, it may affect the operating life of the Air XS sensor.

As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the unit is suitable for their own requirements.

TECHNICAL SPECIFICATION

Operating temperature	-10°C to +45°C
Humidity	0 – 95% RH (non-condensing)
Housing material	PC/ABS – stainless steel
Ingress protection	Main enclosure: IP65 Particle flow path, cap open: IP42
Weight	8.2kg
Cable entries	3x M20 with removable blanks 1x M20 breather gland 1x M20 USB connector
Nominal power supply	100V to 240V AC 50/60Hz 9 to 18V DC
Power consumption	15W
Communications	RS485 data output with MODBUS RTU protocol Ethernet (MODBUS TCP/IP)
External power output	15V 1A for powering external devices (<i>e.g. 4G modem</i>) 3V3 1A
Connectivity	Troxel Breathe PC application
Data download	External USB interface
Instrument data storage	6GB
User interface	128x64 dot matrix display with RGB backlight Navigation keypad (Membrane)
Visual alarms	Custom alarm set points Latching/non-latching
Indicators	1x Green High Brightness LED – Sensor heartbeat 1x Blue High Brightness LED – Communications
Self-test routine	Sensor hardware, Circuitry and Communications on ‘power on’ Manual self-test during use
Certification	CE compliant

At Trolex, we save lives.

We believe that no person should risk their life to earn a living.

Our aim is to become the world's leading name in health and safety technology, through pioneering products that provide real-world benefits to our customers, whenever workers operate in hazardous environments.

For more information about Trolex, please contact us at:

Enquiries

sales@trolex.com

Telephone

+44 (0) 161 483 1435

Fax

+44 (0) 161 483 5556

Trolex Ltd

Newby Road, Hazel Grove
Stockport, Cheshire
SK7 5DY, United Kingdom

Website

www.trolex.com



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